Manitoba Agriculture

GUIDELINES FOR ESTIMATING SWINE PRODUCTION COSTS

BASED ON A 150 SOW HERD, 2500 HOGS SOLD

Information Update

91-03936/

DATE: January , 1991

This publication is intended to provide a format and a set of guidelines for determining costs of production for a hog enterprise. The cost figures listed in this budget are estimates and not figures obtained from an actual survey of the hog industry in Manitoba. Adjustments will be necessary when applying these figures to your own enterprise. The assumptions on which the costs are based are outlined in the supporting pages. These assumptions were arrived at using the breeding stock, management practices, and facilities commonly employed on this size of an enterprise in Manitoba. Productivity and performance assumptions are based on data from national and provincial herd recording programs as well as data collected from numerous herds by feed companies and other organizations. Adjustments will be necessary where individual herd productivity and performance levels differ from those listed.

Accurate, up-to-date, production and financial records are essential for the effective application of these guidelines to an individual operation. Without such information accurate cost of production projections cannot be determined.

MG-15396

FARROW-FINISH PIG COST OF PRODUCTION

This publication is presented in three sections; farrow-finish, weaner and grower-finisher pig production. The weaner and grower-finisher enterprises are assumed to be separate entities. Each has its own feed mix-mill, office and loading space.

The one-page Farrow-Finish summary represents the union of the other two enterprises. Therefore, most of the costs shown in the Farrow-Finish summary are the sum of corresponding costs in the other two summaries. There are some exceptions to this, however, because some costs are eliminated when the weaner and grower-finisher enterprises join together. The savings gained by the farrow-finish enterprise are as follows:

1. No marketing and transportation costs for weaner pigs are charged to the farrow-finish operation because weaner pigs are transferred to another barn on the same property.

2. No weanling cost is charged because pigs are not purchased, they are transferred.

3. No death loss is charged because no weanling cost is charged. Death loss of weaner pigs is already taken into account in the farrow-finish summary because costs are expressed on a "per pig sold" basis.

4. Only one office is required. The office in the farrowing enterprise is used in the farrow-finish summary.

5. Only one feed mix-mill is required. This reduces the cost of maintainance and repairs, insurance, depreciation and investment in equipment and buildings.

6. Interest on operating cost is calculated using the same method as in the farrowing enterprise.

FARROW-FINISH PIG COST OF PRODUCTION

A. OPERATING COSTS	Total	Your Cost	$/Hog Sold	Your Cost	$/Sow/Yr	Your Cost
1. Feed Costs:						
1.01 Sow Lactation Ration	$ 6,915		$ 2.77		$ 46.10	
1.02 Sow Gestation Ration	14,882		5.97		99.22	
1.03 Boar Ration	1,064		0.43		7.10	
1.04 Creep Feed	671		0.27		4.47	
1.05 Starter Ration	20,602		8.26		137.35	
1.06 Grower Ration	38,684		15.51		257.90	
1.07 Finisher Ration	66,619		26.71		444.13	
Total Feed Cost	$149,438		$ 59.92		$ 996.25	
2. Other Operating Costs:						
2.01 Vet, Med, & Supplies	$ 8,010		$ 3.21		$ 53.40	
2.02 Mtce. & Repairs	4,814		1.93		32.09	
2.03 Hydro (Heat)	8,790		3.52		58.60	
2.04 Insurance	3,348		1.34		22.32	
2.05 Manure Haulage	3,984		1.60		26.56	
2.06 Office Supplies	800		0.32		5.33	
2.07 Marketing & Trans.	8,730		3.50		58.20	
2.08 Sow Replacement	6,657		2.67		44.38	
2.09 Boar Replacement	1,775		.71		11.83	
2.10 Stabilization Premium	8,730		3.50		58.20	
Subtotal Op. Costs	$205,073		$ 82.22		$1,389.46	
2.11 Interest on Op.	6,347		2.54		43.01	
TOTAL OPERATING COSTS	**$211,420**		**$ 84.76**		**$1,432.47**	
B. FIXED COSTS						
3. Depreciation:						
3.01 Buildings	$ 12,433		$ 4.98		$ 82.89	
3.02 Equipment	23,252		9.32		155.01	
Total Depreciation Cost	$ 35,685		$ 14.31		$ 237.90	
4. Investment:						
4.01 Buildings	$ 11,167		$ 4.48		$ 74.45	
4.02 Equipment	10,459		4.19		69.73	
4.03 Breeding Herd	4,563		1.83		30.42	
Total Investment Cost	$ 26,190		$ 10.50		$ 174.60	
TOTAL FIXED COSTS	**$ 61,874**		**$ 24.81**		**$ 412.49**	
C. LABOUR						
50 hours/wk	$ 26,000		$ 10.42		$ 173.33	
18.8 hours/wk	7,807		3.13		52.04	
TOTAL LABOUR COST	**$ 33,806**		**$ 13.55**		**$ 225.37**	
TOTAL COST OF PRODUCTION	**$307,101**		**$123.12**		**$2,070.34**	

BREAK-EVEN PRICE (carcass)	$/100 kg		$/CWT	
Operating Cost	108.67		49.29	
Operating & Labour Cost	126.05		57.17	
Operating, Labout & Fixed Cost	157.85		71.60	

Break-even Price = Cost per Hog Sold ÷ (Slaughter Wt. x Dressing %)

WEANER PIG COST OF PRODUCTION (150 SOWS)

A. OPERATING COSTS	Total	Your Cost	$/Pig Sold	Your Cost	$/Sow/Yr	Your Cost
1. Feed Costs:						
1.01 Sow Lactation Ration	$ 6,915		$ 2.66		$ 46.10	
1.02 Sow Gestation Ration	14,883		5.73		99.22	
1.03 Boar Ration	1,065		0.41		7.10	
1.04 Creep Feed	671		0.26		4.47	
1.05 Starter Ration	20,603		7.93		137.35	
Total Feed Cost	$ 44,136		$17.00		$ 294.24	
2. Other Operating Costs:						
2.01 Vet, Medicine & Supp.:						
Professional Services	$ 1,238		$ 0.48		$ 8.25	
Medication	3,405		1.31		22.70	
2.02 Mtce. & Repairs	2,964		1.14		19.76	
2.03 Hydro (Heat)	6,845		2.64		45.63	
2.04 Insurance	2,084		0.80		13.89	
2.05 Manure Haulage	1,889		0.73		12.59	
2.06 Office Supplies	800		0.31		5.33	
2.07 Marketing & Trans.	3,246		1.25		21.64	
2.08 Sow Replacement	6,657		2.56		44.38	
2.09 Boar Replacement	1,775		.68		11.83	
Subtotal Op. Costs	$ 75,036		$28.90		$ 500.24	
2.10 Interest on Op.	2,327		0.90		15.51	
TOTAL OPERATING COSTS	**$ 77,363**		**$29.79**		**$ 515.75**	
B. FIXED COSTS						
3. Depreciation:						
3.01 Buildings	$ 7,272		$ 2.80		$ 48.48	
3.02 Equipment	15,104		5.82		100.69	
Total Depreciation Cost	$ 22,376		$ 8.62		$ 149.17	
4. Investment:						
4.01 Buildings	$ 6,545		$ 2.52		$ 43.63	
4.02 Equipment	6,797		2.62		45.31	
4.03 Breeding Herd	4,563		1.76		30.42	
Total Investment Cost	$ 17,904		$ 6.90		$ 119.36	
TOTAL FIXED COSTS	**$ 40,280**		**$15.51**		**$ 268.53**	
C. LABOUR						
50 hours/wk.	$ 26,000		$10.01		$ 173.33	
TOTAL COST OF PRODUCTION	**$143,642**		**$55.32**		**$ 957.61**	

GROWER AND FINISHER PIG COST OF PRODUCTION (2500 Hogs/Year)

A. OPERATING COSTS	Total	Your Cost	$/Hog Sold	Your Cost	$/Pig Place	Your Cost
1. Feed Costs:						
1.01 Grower Ration	$ 38,684		$ 15.51		$ 46.31	
1.02 Finisher Ration	66,619		26.71		79.74	
Total Feed Cost	$105,303		$ 42.22		$126.05	
2. Other Operating Costs:						
2.01 Weanling Cost	$131,517		$ 52.73		$157.43	
2.02 Veterinary Cost	3,367		1.35		4.03	
2.03 Maintenance & Repairs	2,369		0.95		2.84	
2.04 Hydro (Heat)	1,945		0.78		2.33	
2.05 Insurance	1,871		0.75		2.24	
2.06 Manure Haulage	2,095		0.84		2.51	
2.07 Office Supplies	274		0.11		0.33	
2.08 Marketing & Transportation	8,730		3.50		10.45	
2.09 Death Loss	5,487		2.20		6.57	
2.10 Stabilization Premium Cost	8,730		3.50		10.45	
Subtotal Op. Costs	$271,689		$108.93		$325.22	
2.11 Interest on Operating Cost	8,605		3.45		10.30	
TOTAL OPERATING COSTS	**$280,294**		**$112.38**		**$335.52**	
B. FIXED COSTS						
3. Depreciation:						
3.01 Buildings	$ 6,285		$ 2.52		$ 7.52	
3.02 Equipment	11,149		4.47		13.35	
Total Depreciation Cost	$ 17,434		$ 6.99		$ 20.87	
4. Investment:						
4.01 Buildings	$ 5,637		$ 2.26		$ 6.75	
4.02 Equipment	5,013		2.01		6.00	
Total Investment Cost	$ 10,650		$ 4.27		$ 12.75	
TOTAL FIXED COSTS	**$ 28,084**		**$ 11.26**		**$ 33.62**	
C. LABOUR						
18.8 hrs/week @ $8/hr.	$ 7,807		$ 3.13		$ 9.34	
TOTAL COST OF PRODUCTION	**$316,185**		**$126.77**		**$378.48**	

BREAK-EVEN PRICE (carcass)	$/CWT		$/100 kg	
Operating Cost	144.08		65.35	
Operating & Labour Cost	148.09		67.17	
Operating, Labour & Fixed Cost	162.53		73.72	

Break-even Price = Cost per Hog Sold x Dressing Wt. ÷ (Slaughter %)

WEANER PIG PRODUCTION COSTS - JANUARY, 1991

INPUT TABLES

ASSUMPTIONS

1. This Budget outlines the cost of production for a 150 Sow Farrowing operation.
2. Buildings and Equipment are valued at new cost.
3. Home-Mixed feed is used. Ingredients are purchased and delivered to farm.
4. Manure Haulage is contracted out.
5. Gilts are purchased for herd replacement.
6. No weaner pigs are sold.

TABLE 1 INDICATORS OF PRODUCTIVITY

Sows	150
Boars	9
Litters/Sow/Year	2.10
Average Weaning Age	28
Average Born Alive per Litter	10.00
Percent Pre-Weaning Mortality	15.0
Percent Post-Weaning Mortality	3.0

TABLE 2 HERD PROFILE

	TOTAL	/SOW	/LITTER	% MORTALITY
Sows	150			
Boars	9			
Litters	315	2.10		
Pigs Born Alive	3,150	21.00	10.00	
Pigs Died, Pre-Weaning	473	3.15	1.50	15.0
Pigs Weaned	2,677	17.85	8.50	
Pigs Died, Post-Weaning	80	0.53	0.25	3.0
Weaner Pigs Sold	2,597	17.31	8.24	

TABLE 3 FEED REQUIREMENTS AND COSTS

		Feed Costs	
	Requirement	Purchased	Home-Mixed
Dry Sow Ration	2.3 kg/day	$ 0.00	$140.88/tonne
Nursing Sow Ration	4.7 kg/day	$ 0.00	$166.80/tonne
Boar Ration	2.3 kg/day	$ 0.00	$140.88/tonne
Creep Feed	0.5 kg/pig	$10.65 /25 kg	
Starter Ration	27.0 kg/pig	$ 0.00	$293.87/tonne

TABLE 4 WEANER PIG EFFICIENCY

Days Post-Weaning	38 days
Target Weaning Weight	5.0 kg
Target Sale Weight	20.0 kg
Feed Conversion Ratio	1.80 kg starter ration/kg weight gain
Average Daily Gain	0.39 kg weight gain/day post-weaning

TABLE 5 CAPITAL COSTS - SOW BARN (See Footnote *)

	ft^2	Your Farm	$/ft^2$	Your Farm	TOTAL	Your Farm	/SOW	Your Farm
Buildings								
Gestation	4,050	_____	$13.10	_____	$ 53,005	_____	$ 353.70	_____
Farrowing/Nursing	4,725	_____	15.15	_____	71,584	_____	477.23	_____
Office & Loading	200	_____	19.00	_____	3,800	_____	25.33	_____
Feed Mill (building only)			0		0	_____	0	_____
Total Building Cost					$128,439	_____	$ 856.26	_____
Equipment								
Gestation			$11.10	_____	$ 44,955	_____	$ 299.70	_____
Farrowing/Nursing			$16.10	_____	76,073	_____	507.15	_____
Feed Mill (equipment only)			0		0	_____	.00	_____
Total Equipment Cost					$121,028	_____	$ 806.85	_____
Total Buildings & Equipment Cost					$249,466	_____	$1,663.11	_____
Breeding Stock								
Value of Replacement Sow		$290 /sow			$ 43,500	_____	$ 290.00	_____
Value of Replacement Boar		$800 /boar			7,200	_____	48.00	_____
Total Breeding Stock Cost					$ 50,700	_____	$ 338.00	_____
TOTAL CAPITAL INVESTMENT					$300,166	_____	$2,001.11	_____

*FOOTNOTE:
THE NUMBER OF SQUARE FEET IN THE BUILDING, AND THE COST PER SQUARE FOOT FOR BUILDINGS AND EQUIPMENT ARE APPROXIMATIONS ONLY.

Cost per dow for buildings and equipment will vary depending on location around the province. However, it is generally around $1660/sow for larger units such as this one, excluding the feed mill, and $1800/sow for smaller 50-80 sow units. Therefore, the cost per square foot may increase by 9-10% for smaller barns.

Cost assumes shallow manure pits in the barn are flushed to exterior holding pit which is then pumped to lagoon.

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1 ft^2 = 0.0929 m^2; 1 m^2 = 10.764 ft^2; 1 ft = 0.3048 m

FEED REQUIREMENT AND COST SUMMARY - Prices given are for Oct. 1/90, Winnipeg

DRY SOW RATION:	Ingredients	$/tonne	Ration Cost
Barley	650 kg	$ 85.00	$ 55.25
Wheat	200	$ 105.00	$ 21.00
Sub-total			$ 76.25
Soybean Meal	100	$ 255.00	$ 25.50
Premix	50	$ 685.00	$ 34.25
(20% Ca, 11.0% Phos)			
TOTAL FOR DRY SOW:	1,000 kg		$136.00
TOTAL COST ADJUSTED FOR WEIGHT LOSS		1.25%	$137.70
ADJUSTED COST PLUS PROCESSING COST		$ 3.18	$140.88

NURSING SOW RATION:	Ingredients	$/tonne	Ration Cost
Barley	390 kg	$ 85.00	$ 33.15
Wheat	390	$ 105.00	$ 40.95
Sub-total			$ 74.10
Soybean Meal	150	$ 255.00	$ 38.25
Premix	50	$ 685.00	$ 34.25
(20% Ca, 11.0% Phos)			
Canola Oil	20	$ 750.00	$ 15.00
TOTAL FOR NURSING SOW:	1,000 kg		$161.60
TOTAL COST ADJUSTED FOR WEIGHT LOSS		1.25%	$163.62
ADJUSTED COST PLUS PROCESSING COST		$ 3.18	$166.80

BOAR RATION:	Ingredients	$/tonne	Ration Cost
Barley	650 kg	$ 85.00	$ 55.25
Wheat	200	$ 105.00	$ 21.00
Sub-total			$ 76.25
Soybean Meal	100	$ 255.00	$ 25.50
Premix	50	$ 685.00	$ 34.25
(20% Ca, 11.0% Phos)			
TOTAL FOR BOAR:	1,000 kg		$136.00
TOTAL COST ADJUSTED FOR WEIGHT LOSS		1.25%	$137.70
ADJUSTED COST PLUS PROCESSING COST		$ 3.18	$140.88

STARTER RATION:	Ingredients	$/tonne	Ration Cost
Wheat	740	$ 105.00	$ 77.70
Sub-total			$ 77.70
Soybean Meal	100	$ 255.00	$ 25.50
Canola Oil	10	$ 750.00	$ 7.50
Supplemental Protein (Base Mix)	150	$1,176.00	$176.40
(25% CP, 6% Ca, 3% Phos, 6.0% Lysine)			
TOTAL FOR STARTER:	1,000 kg		$287.10
TOTAL COST ADJUSTED FOR WEIGHT LOSS		1.25%	$290.69
ADJUSTED COST PLUS PROCESSING COST		$ 3.18	$293.87

Nutrient Profile:	Dry Sow & Boar Ration	Nursing Sow Ration	Starter Ration
Crude Protein (%)	14.6	16.6	18.5
Metabolizable energy (KCal/kg)	3068	3248	3490
Lysine (%)	0.64	0.77	1.30
Calcium (%)	1.08	1.08	0.98
Phosphorus (%)	0.87	0.89	0.72

GROWER & FINISHER PIG PRODUCTION COSTS - JANUARY, 1991

INPUT TABLES

ASSUMPTIONS

1. This Budget outlines the cost of production for a 2500 pig grower-finisher operation only.
2. Buildings and Equipment are valued at new cost.
3. Home-Mixed Feed is used.
4. Manure Haulage is contracted out.
5. Livestock values are based on a Market Price for Pork of:
   $155.10/100 kg
   or: $0.70/lb Dressing % = 78

TABLE 1 INDICATORS OF PIG PRODUCTIVITY

	Grower	Finisher	Total
No. of Pigs (Beginning)	2,597	2,545	--
Average Beginning Weight (kg)	20.0	50.0	--
Average Ending Weight (kg)	50.0	100.0	--
Percent Mortality	2.0	2.0	4.0
Days on Feed	50	70	120
Feed Conversion Ration (1)	2.80	3.50	3.24
No. of Pigs (Ending)	2,545	2,494	--
Weight Gain/Pig (kg)	30.0	50.0	80.0
Feed Intake/Pig (kg)	84.0	175.0	259.0
Average Daily Gain (kg)	0.60	0.71	0.67
Average No. of Pigs in Barn (2)	352	483	835

(1) FOOTNOTE: The Feed Conversion Ratio in the "Total" column is a weighted average of the other feed conversion ratios. Also note that an accurate feed conversion ratio for the grower-finisher enterprise is calculated by dividing "total Feed used per Year" by "Total Gain per Year"; where "Total Gain per Year" equals "Total Hogs Sold" times "Gain per Hog". When calculated in this way, the feed conversion ratio includes feed lost through wastage and weight gain lost through death of pigs.

(2) FOOTNOTE: Assume that "Avg. No. of Pigs in Barn" equals "Pig Places".

TABLE 2 PRODUCTIVITY PROFILE

	Total	
Pigs Purchased	2,597	
Pigs Died	104	4.0% mortality *
Pigs Sold	2,494	(16.63 hogs sold/sow)
Turnover (365 ÷ days on feed)	3.04	

TABLE 3 FEED REQUIREMENTS AND COSTS

	FCR*	kg/pig	Ration Cost Home-mixed
Grower Ration	2.80	84.0	$184.63/tonne
Finishing Ration	3.50	175.0	$152.65/tonne

* FCR = Feed Conversion Rate

TABLE 4 CAPITAL COSTS - GROWER AND FINISHER BARN (1200 Pigs/Year)

	ft^2	Your Farm	$/ft^2$	Your Farm	TOTAL	Your Farm	/Pig Place	Your Farm
Buildings								
Finishing Barn	7,686		$13.40		$102,989		$ 123.28	
Office & Loading	0		$ .00		0		.00	
Feed Mill (building only)			17,000		17,000		20.35	
Total Building Cost					$119,989		$ 143.63	
Equipment								
Finishing Barn			$10.60		81,469		97.52	
Feed Mill (equipment only)			30,000		30,000		35.91	
Total Equipment Cost					$111,469		$133.43	
Total Buildings and Equipment Cost					$231,458		$277.06	
Livestock (see Footnote **)					$ 51,181		$ 61.26	
TOTAL CAPITAL INVESTMENT					$282,639		$338.32	

FOOTNOTE: THE NUMBER OF SQUARE FEET IN THE BUILDING, AND THE COST PER SQUARE FOOT FOR BUILDINGS AND EQUIPMENT ARE APPROXIMATIONS ONLY. A certified building plan which is designed according to average inventory of grower-finisher pigs must be used to calculate accurate dimensions and area for new buildings. See your local Agricultural Engineer for assistance. Cost per square foot may vary according to desired productivity level. In this program, 9.2 ft^2 per pig place is used. Average inventory of pigs is assumed to equal average number of pig places.

Cost per square foot will vary with location around the province. However, it is generally around $225/place for the larger units such as this one,excluding the feed mill, and $240/place for smaller units. Therefore, cost/ft^2 may increase by 5% in the smaller units. Feed Mill cost will vary with capacity. Assume same manure handling system as in sow barn.

*FOOTNOTE: 1 m^2 = 10.764 ft^2; 1 ft^2 = 0.0929 m^2

**FOOTNOTE: Livestock Investment is calculated as follows:

$$\frac{[\text{Weaner Cost} + (\text{Pork Price} \times \text{Slaughter Weight} \times \text{Dressing \%})]}{2} \times \text{Average in Barn}$$

Where: Value of Carcass = $\frac{\text{Finisher Ending Weight} \times \text{Dressing \%} \times \text{Market Price (¢/kg)}}{100}$

FEED REQUIREMENT AND COST SUMMARY - Prices given are for Oct. 1/90, Winnipeg

GROWER RATION:	Ingredients	$/tonne	Ration Cost
Barley	375 kg	$ 85.00	$ 31.88
Wheat	390	$ 105.00	$ 40.95
Sub-total			$ 72.83
Soybean Meal	175	$ 255.00	$ 44.63
Premix	50	$1,085.00	$ 54.25
(18% Ca, 8.0% Phos, Lysine 4.0%)			
Canola Oil	10	$ 750.00	$ 7.50
TOTAL FOR GROWER:	1,000 kg		$179.21
TOTAL COST ADJUSTED FOR WEIGHT LOSS		1.25%	$181.45
ADJUSTED COST PLUS PROCESSING COST		$ 3.18	**$184.63**

FINISHER RATION:	Ingreidents	$/tonne	Ration Cost
Barley	535 kg	$ 85.00	$ 45.48
Wheat	270	$ 105.00	$ 28.35
Sub-total			$ 73.83
Soybean Meal	150	$ 255.00	$ 38.25
Premix	35	$ 801.00	$ 28.04
(20% Ca, 7.5% Phos, Lysine 2.0%)			
Canola Oil	10	$ 750.00	$ 7.50
TOTAL FOR FINISHER:	1,000 kg		$147.62
TOTAL COST ADJUSTED FOR WEIGHT LOSS		1.25%	$149.47
ADJUSTED COST PLUS PROCESSING COST		$ 3.18	**$152.65**

Nutrient Profile:	Grower Ration	Finisher Ration
Crude Protein (%)	17.6	16.6
Metabolizable energy (KCal/kg)	3217	3210
Lysine (%)	1.00	0.85
Calcium (%)	0.99	0.79
Phosphorous (%)	0.75	0.60

WEANER PIG PRODUCTION COSTS - NOVEMBER, 1989

WORKSHEET

A. OPERATING COSTS

1. Feed Requirements and Costs:

1.01 Sow Lactation Ration		Your Farm
	28 days Average Weaning Age	
x	2.10 litters/sow/year	
=	58.8 days lactation	
x	4.7 kg ration/day	
x	$166.80 /tonne ration	
÷	1,000 kg/tonne	
=	**$46.10 /sow/year**	

1.02 Sow Gestation Ration		
	365 days/year	
-	58.8 days lactation	
=	306.2 days gestation	
x	2.3 kg ration/day	
x	$140.88 /tonne ration	
÷	1,000 kg/tonne	
=	**$ 99.22 /sow/year**	

1.03 Boar Ration		
	365 days	
x	2.3 kg ration/day	
x	$140.88 /tonne ration	
÷	1,000 kg/tonne	
x	9 boars	
÷	150 sows	
=	**$7.10 /sow/year**	

1.04 Creep Feed		
	0.5 kg ration/pig	
x	$10.65 /25 kg bag of creep feed	
÷	25 kg/bag	
x	21 pigs born alive/sow/year	
=	**$4.47 /sow/year**	

1.05 Starter Ration — Your Farm

	20.0 kg	Target Sale Weight
-	5.0 kg	Target Weaning Weight
=	15.0 kg	Weight Gain
x	1.80	Feed Conversion Ratio
=	27 kg	ration/pig
x	$293.87	/tonne starter ration
÷	1,000	kg/tonne
x	17.31	pigs sold/sow/year
=	**$137.35**	**/sow/year**

2. Other Operating Costs:

2.01 Veterinary Medicine & Supplies

Professional Services	$8.25 /sow/year
Medication	$22.70 /sow/year

2.02 Maintenance & Repairs

Building & Equipment Cost	$1,663.11	/sow
Percent for Rep. & Mtce.	x 1.00 %	/sow/year
	$16.63	**/sow/year**

2.03 Electric Heat

Usage	1,170	kwh/sow
Rate	x $0.0390	/kwh
	$45.63	**/sow/year**

2.04 Insurance

Total Capital Investment	$2,001.11	/sow
Insurance/$100 Capital	x $0.60	/$100 Capital
	÷ 100	
	$12.01	**/sow/year**

2.05 Manure Haulage

Volume	30.0	litres/sow/day
	÷ 1,000	litres/cubic m
	= 0.0300	cubic metres
Haulage rate	x $1.15	/cubic metre
	x 365	days
	$12.59	**/sow/year**

2.06 Office Supplies

Minimum Cost			$500.00
plus:			
Number of Sows	150		
x Fixed Rate/Sow	$2/sow		$300.00
			$800.00
		÷	150 sows
			$5.33 /sow/year

2.07 Marketing & Transportation — Your Farm

Weaner pigs sold		17.31 pigs/sow/year	
Mktg. & Trans. rate	x	$ 1.25 /pig sold	
		$21.64 /sow/year	

2.08 Sow Replacement

Value of Replacement Sow		$290.00 /sow	
less:			
Cull sow weight 180.0 kg/sow			
x Cull sow price $1.08 /kg			
x Sow Dressing % 80 %			
Value of Cull Sow	-	$155.52 /sow	
Net Replacement Cost	=	$134.48	
Sow Culling Rate	x	33.00 percent	
Sow Replacement Cost/Sow		**$44.38 /sow/year**	

2.09 Boar Replacement

Value of Replacement Boar		$ 800.00 /boar	
less:			
Cull Boar wt. 225.0 kg/boar			
Cull Boar price $0.90 /kg live			
Value of Cull Boar	-	$162.00 /boar	
Net Replacement Cost	=	$638.00	
Boar Culling Rate	x	33.00 %	
Number of Boars in Herd	x	9 boars	
Number of Sows in Herd	÷	150 sows	
Boar Replacement Cost/Sow		**$12.63 /sow/year**	

2.11 Interest on Operating Cost:

$$\text{Sub-total Operating Cost} \times \frac{\text{Farrow-to-Farrow Period}}{365} \times \frac{\text{\% Interest}}{2}$$

Sub-Total Operating Cost = $474.38 /sow

Farrow-to-Farrow Period:

$$= \frac{365}{\text{litters/sow/year}} = \frac{365}{2.10} = 174 \text{ days}$$

Operating Interest Rate: 13 %

$14.68 /sow/year

B.	FIXED COSTS			Your Farm
3.	**Depreciation:** Original Cost - Salvage Value / Useful Life			
3.01	**Buildings**			
	Total Building Cost		$ 969.59 /sow	
	Salvage Value	-	$0.00 /sow	
	Useful Life	÷	20 years	
		=	**$48.48 /sow/year**	
3.02	**Equipment**			
	Total Equipment Cost		$1,006.85 /sow	
	Salvage Value	-	$0.00 /sow	
	Useful Life	÷	10 years	
			$100.69 /sow/year	
4.	**Investment:** (Original Cost + Salvage Value) / 2 x Investment Rate			
	Investment Rate	=	9.00 %	
4.01	**Buildings**			
	Total Building Cost		$969.59 /sow	
	Salvage Value		$0.00 /sow	
			$ 43.63 /sow/year	
4.02	**Equipment**			
	Total Equipment Cost		$1,006.85 /sow	
	Salvage Value		$0.00 /sow	
			$ 45.31 /sow/year	
4.03	**Breeding Stock**			
	Average Value of Breeding Stock		$338.00 /sow	
			$ 30.42 /sow	
C.	LABOUR			
	Total Hours per 7-Day Week		50.0 hours/week	
		x	52 weeks/year	
	Hourly Wage	x	$10 /hour	
		x	150 sows	
		=	**$173.33 /sow/year**	

GROWER & FINISHER PIG PRODUCTION COSTS - JANUARY, 1991

WORKSHEET

A. OPERATING COSTS

1. Feed Requirements and Costs:

1.01 Grower Ration

		Your Farm
	30.0 kg weight gain/pig	
x	2.80 Feed Conversion Ratio	
=	84.0 kg ration/pig	
x	$184.63 /tonne ration	
÷	1,000 kg/tonne	
=	**$15.51 /pig sold**	

1.02 Finisher Ration

	50.0 kg weight gain/pig	
x	3.50 Feed Conversion Ratio	
=	175.0 kg ration/pig	
x	$152.65 /tonne ration	
÷	1,000 kg/tonne	
=	**$26.71 /pig sold**	

2. Other Operating Costs:

2.01 Weanling Cost

=	**$52.73 /pig purchased**	

2.02 Veterinary Cost

	$1.30 /pig purchased	
x	2,597 pigs purchased	
÷	2,494 pigs sold	
=	**$1.35 /pig sold**	

2.03 Maintenance & Repairs

	1 % of Total Capital Investment	
x	$236,930 Total Buildings & Equip. Cost	
÷	2,494 pigs sold	
=	**$0.95 /pig sold**	

2.04 Hydro (Heat)

		Your Farm
	60 kilowatt hours/pig place	
x	$0.0390 /kilowatt hour	
x	835 pig places	
÷	2,494 pigs sold	
=	**$0.78 /pig sold**	

2.05 Insurance

	$0.60 per $100 Capital Invested	
÷	100	
x	$310,137 Total Capital Invested	
÷	2,494 pigs sold	
=	**$0.75 /pig sold**	

2.06 Manure Haulage

	6.0 litres/pig/day	
x	365 day/year	
x	835 average inventory of pigs	
=	1,829,545 litres/year	
÷	1,000 litres/cubic metre	
=	1,829.54 cubic metres/year	
x	1.15 /cubic metre	
=	$2,103.98 manure haulage cost	
÷	2,494 pigs sold	
=	**$0.84 /pig sold**	

2.07 Office Supplies

	$0.32 /pig place	
x	835 pig places	
÷	2,494 pigs sold	
=	**$0.11 /pig sold**	

2.08 Marketing & Transportation

=	**$3.50 /pig sold**	

2.09 Death Loss

	$52.73 /pig purchased	
x	104 pigs died	
÷	2,494 pigs sold	
=	**$2.20 /pig sold**	

Note: Because each cost item in the grower-finisher budget is expressed on a per hog SOLD basis, death loss is automatically taken into account for these cost items. The only exception to this is the weanling cost item, which is expressed on a per pig PURCHASED basis. Therefore, death loss is included for purchased weaner pigs only.

2.10 Interest on Operating Cost — Your Farm

$$(Wc \times \frac{DOF}{365} \times \%Int) + [(SOC - WC) \times \frac{DOF}{365} \times \frac{\%Int}{2}]$$

WC	= Weaner Cost	$ 52.73/pig	
DOF	= Day on Feed	120 days	
%Int	= % Operating Interest Rate	13%	
SOC	= Sub-total Operating Cost	= $108.93/pig sold	
		$ 3.45/pig sold	

B. FIXED COSTS

3. Depreciation: $\frac{\text{Original Cost - Salvage Value}}{\text{Useful Life}}$

3.01 Buildings

Total Building Cost		$125,461	
Total Salvage Value	-	$0.00	
	=	$125,461	
Useful Life (years)	÷	20	
Pigs Sold	÷	2,494	
	=	**$2.52 /pig sold**	

3.02 Equipment

Total Equipment Cost		$111,469	
Salvage Value		$0.00	
Useful Life	-	10	
	=	**$4.47 /pig sold**	

4. Investment: $\frac{\text{(Original Cost + Salvage Value)}}{2}$ x Investment Rate

4.01 Buildings

Total Building Cost		$125,461	
Salvage Value	+	$0.00	
	=	$125,461	
	÷	2	
Investment Rate	x	9 %	
Pigs Sold	÷	2,494	
	=	**$2.26 /pig sold**	

4.02 Equipment

Total Equipment Cost		$111,469	
Salvage Value	+	$0.00	
	=	**$2.01 /pig sold**	

C. **LABOUR**

Annual Labour Hours = 1 Hour/Day + 2 Hours/Day per 1,000 Pig Places

			Your Farm
1 Hour/Day	=	365 Hours/Year	
plus:			
835 pig places			
x 2 hours/day/1,000 pig places			
x 365 day/year			
÷ 1,000 pig places	+	610 hours/year	
Total Hours/Year	=	975 hours/year	
Total Hours/Week	(or =)	18.8 hours/week	
Hourly Wage	x	$8.00 /hour	
Pigs Sold	÷	2,494 pigs sold	
	=	$3.13 /pig sold	

OTHER EQUATIONS:

1. Percent Mortality = $\frac{\text{Pigs Died}}{\text{Pigs Purchased}}$

2. Average Feed Conversion Ratio (FCR) =

   (g = grower) (f = feeder)

   $$\frac{(FCR^g \times \text{Wt. Gain}^g) + (FCR^f \times \text{Wt. Gain}^f)}{\text{Total Weight Gain/pig}}$$

3. Average Daily Gain (ADG) = $\frac{\text{Total Weight Gain/pig}}{\text{Days on Feed}}$

4. Feed Intake/pig = Total Weight Gain/pig x FCR avg.

5. Potential Throughput = Pig Places x Turnover

6. Percent Utilization of Barn = $\frac{\text{Average Inventory}}{\text{Pig Places}}$

7. Break-Even Price (c/kg) = $\frac{\text{Total Cost of Production/pig sold}}{\text{Dressing \%}}$

   ($/lb) = $\frac{\text{Total Cost of Production/pig sold}}{\text{Dressing \% x 220.46}}$

FOR MORE INFORMATION SEE YOUR LOCAL MANITOBA AGRICULTURE OFFICE.

If you would like to run a number of alternatives on computer, please contact your local Manitoba Agriculture Office. See pages 20-22.

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WEANER PIG PRODUCTION COSTS
COMPUTER INPUT FORM

INDICATORS OF PRODUCTIVITY

Sows	_____
Boars	_____
Litter/Sow/Year	_____
Average Weaning Age (days)	_____
Average Born Alive per Litter	_____
Percent Pre-Weaning Mortality	_____
Percent Post-Weaning Mortality	_____

FEED REQUIREMENTS AND COSTS

			Purchased Cost	Home-Mixed Cost (See Feed Table)
Dry Sow Ration	_____	kg/sow/day	_____ $/tonne	_____ $/tonne
Nursing Sow Ration	_____	kg/sow/day	_____ $/tonne	_____ $/tonne
Boar Ration	_____	kg/boar/day	_____ $/tonne	_____ $/tonne
Creep Feed	_____	kg/pig/day	_____ $/25 kg bag	_____ $/25 kg bag
Starter Ration	_____	kg/pig/day	_____ $/tonne	_____ $/tonne

WEANER PIG EFFICIENCY

Days Post-Weaning	_____	days
Target Weaning Weight	_____	kg
Target Sale Weight	_____	kg

OTHER OPERATING COSTS

Vet. Cost: Professional Service		_____	$/sow
Medication		_____	$/sow
Maintenance & Repair		_____	% of Total Capital Investment
Electric Heat: total cost _____	or	_____	kilowatt hours/sow (See Information Update pg. 13)
	x	_____	/kilowatt hour (See Information Update pg. 13)
Insurance		_____	$/$100 Capital Invested
Manure Haulage: total cost _____	or	_____	litres/sow/day ** (See Footnote & Info. Update pg. 13)
		_____	$/cubic metre (See Footnote & Info. Update pg. 13)
Marketing & Transportation		_____	$/weaner pig sold
Breeding Herd Replacement:		_____	% of sows replaced per year
Cull Sow Weight		_____	kg
Cull Sow Price		_____	$/kg (carcass)
Value of Replacement Sow		_____	$/boar
Boar Replacement		_____	% of boars replaced per year
Cull Boar Weight		_____	kg
Cull Boar Price		_____	$/kg (carcass)
Value of Replacement Boar		_____	$/sow
Operating Loan Interest Rate		_____	%

FIXED COSTS

Depreciation (straight line):		
Useful Life:		
Buildings	_____	years
Equipment	_____	years
Salvage Value (% of original cost):		
Buildings	_____	%
Equipment	_____	%
Investment Interest Rate	_____	%

LABOUR

Total Person-Hours per 7-day week	_____	person-hours/week
Hourly Wage	_____	$/hour

CAPITAL COSTS: SOW BARN ONLY

	ft^2	$/ft^2$	Total Cost
Buildings			
Gestation	_____	_____	_____
Farrowing/Nursing	_____	_____	_____
Office & Loading	_____	_____	_____
Feed Mill (building only)			_____
Equipment (See Footnote **)			
Gestation	_____	_____	_____
Farrowing/Nursing	_____	_____	_____
Feed Mill (equipment only)			_____

** FOOTNOTE:
1 cubic metre = 1000 litres 1 cubic metre = 35.314 cubic feet 1 cubic metre = 219.97 imperial gallons

GROWER-FINISHER PIG PRODUCTION COSTS
COMPUTER INPUT FORM

Market Price for Pork of: ____ ____ $/100 kg or: _____ $/lb Market Index _____ Dress % ____

INDICATORS OF PRODUCTIVITY

	GROWER	FINISHER
No of Pigs (Beginning)	_____	_____
Average Beginning Weight (kg)	_____	_____
Average Ending Weight (kg)	_____	_____
Percent Mortality	_____	_____
Days on Feed	_____	_____
Feed Conversion Ratio (Feed:Gain)	_____	_____

FEED REQUIREMENTS AND COSTS

		Purchased Cost	Home-Mixed Cost (See Feed Table)
Grower Ration	_____ kg/pig/day	_____ $/tonne	_____ $/tonne
Finishing Ration	_____ kg/pig/day	_____ $/tonne	_____ $/tonne

OTHER OPERATING COSTS

Veterinary Costs: Professional & Medication		_____ $/weaner pig purchased
Maintenance & Repair		_____ % of Total Capital Investment
Electric Heat: total cost _____	or	_____ kilowatt hours/sow (See Information Update pg. 17)
	x	_____ $/kilowatt hour (See Information Update pg. 17)
Insurance		_____ $/$100 Capital Invested
Manure Haulage: total cost _____	or	_____ litres/sow/day ** (See footnote & Info. Update pg. 17)
	x	_____ $/cubic metre
Marketing & Transportation		_____ $/pig sold
Office Supplies: total cost _____	or	_____ $/pig place
Weanling Cost		_____ $/pig purchased
Stabilization Premium Cost		_____ $/hog sold
Operating Loan Interest %		_____ %

CAPITAL COSTS: FINISHER BARN (See Footnote **)

	ft^2	$/ft^2$	Total
Buildings			
Finishing Barn	_____	_____	_____
Office & Loading	_____	_____	_____
Feed Mill (building only)			_____
Equipment (See Footnote **)			
Finishing Barn			
Feed Mill (equipment only)	_____	_____	_____
			_____

FIXED COSTS

Depreciation (straight line):	
Useful Life:	
Buildings	_____ years
Equipment	_____ years
Salvage Value (% of original cost):	
Buildings	_____ %
Equipment	_____ %
Investment Interest Rate	_____ %

LABOUR

Total Person-Hours per 7-day week	_____ person-hours/week
Hourly Wage	_____ $/hour

** FOOTNOTE:
1 cubic metre = 1000 litres 1 cubic metre = 35.314 cubic feet 1 cubic metre = 219.97 imperial gallons

HOME-MIXED FEED COSTS
COMPUTER INPUT FORM

FEED INGREDIENT COSTS	PRICE
Barley ($/tonne)	
Wheat ($/tonne)	
Corn ($/tonne)	
Soybean Meal - 44%	
Canola Meal ($/tonne)	
Sow & Boar Vit-Min. Premix ($/25 kg bag) [40 bags/tonne]	
Starter Vit-Min. Premix ($/25 kg bag)	
Grower Vit-Min. Premix ($/25 kg bag)	
Finisher Vit-Min. Premix ($/25 kg bag)	
Canola Oil ($/tonne)	
Supplemental Protein ($/tonne)	
Other Ingredients ($/tonne)	
Processing Cost ($/tonne) (Includes Operating & Labour Cost)	

FEED INGREDIENT REQUIREMENTS

Instructions: Input the amount of each ingredient found in one tonne of feed for each pig category. These rations must be nutritionally balanced.

	DRY SOW	NURSING SOW	BOAR RATION
Barley (kg/tonne)			
Wheat (kg/tonne)			
Corn (kg/tonne)			
Soybean Meal (kg/tonne)			
Canola Meal (kg/tonne)			
Vit-Min. Premix (kg/tonne)			
Canola Oil (kg/tonne)			
Supplemental Protein (Base Mix)			
Other Ingredients (kg/tonne)			
TOTAL MUST EQUAL 1,000 kg	1,000 kg	1,000 kg	1,000 kg

WEIGHT RANGE (kg)	STARTER RATION	GROWER RATION	FINISHER RATION
Barley (kg/tonne)			
Wheat (kg/tonne)			
Corn (kg/tonne)			
Soybean Meal (kg/tonne)			
Canola Meal (kg/tonne)			
Vit-Min. Premix (kg/tonne)			
Canola Oil (kg/tonne)			
Supplemental Protein (Base Mix)			
Other Ingredients (kg/tonne)			
TOTAL MUST EQUAL 1,000 kg	1,000 kg	1,000 kg	1,000 kg